Edgewood Area - Aberdeen Proving Ground, Maryland 21010-5424
U.S. Army Soldier and Biological Chemical Command

Process Engineering Facility

FEATURES:

- Cryogenic Storage/ Database Management
- 5-, 30-, 80-, 150-, and 1,500-liter Fermentors
- Lyophilization, Milling, and Spray Drying
- Micro- and Ultra-Filtration
- Hollow Fiber Bioreactors
- Combinational Antibody Gene Libraries
- Immunoassay Test Development and Validation
- *In vitro* Cyto- and Geno-toxicity

The Process Engineering Facility (PEF) is a 20,000 square foot research and development facility dedicated to providing the Department of Defense with the equipment and physical plant requirements for research and development of cell-based manufacturing processing for producing proteins, enzymes, antibodies, or other cellular products. The PEF possesses state-of-the-art equipment to perform scale-up production and optimization studies using hollow-fiber bioreactors, stirred reactor fermentors, downstream filtration/purification and final product milling/drying/preservation. A cryogenic storage facility was recently installed in the PEF to provide complete archival storage and database management for material deposit, testing, tracking, and shipping. In addition to basic R&D bioprocess engineering, the PEF is amenable to performing customer-designed batch production runs for material required in initial product testing and evaluation.

The PEF is staffed with a highly-trained, multidisciplinary team of scientists capable of providing cradle-to-grave project support, from basic molecular biology and gene cloning to scale-up bioprocess design, validation, and optimization for improved product quality and/or cost savings. The staff has extensive experience in performing a complete array of bioanalytical procedures (e.g., immunoassay, fluorescence microscopy, electrophoresis, spectroscopy, etc.) for both process and product quality control.

The PEF is also equipped to perform *in vitro* cytotoxicity tests on human and animal cell cultures under Good Laboratory Practices protocols and has recently added the capability for using gene arrays to study the effects of systemic exposures on gene expression.

For additional information, E-mail research.technology@sbccom.apgea.army.mil.

For information on Technology Transfer applications, please contact us by E-mail (technical.outreach@sbccom.apgea.army.mil) or by fax to 410-436-6529.

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